

7th IRTAD Conference
BETTER ROAD SAFETY DATA
FOR BETTER SAFETY OUTCOMES
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Collection of Key Performance Indicators for Road Safety in Greece

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Background

- In 2020, Greece recorded 579 fatalities in road crashes, achieving a **54% reduction compared to 2010**. Despite this significant improvement, additional efforts are required in order to further improve road safety performance.
- An important step towards this direction is to better understand the **factors leading to road crashes** and casualties.
- Within this context, the Ministry of Infrastructure and Transport in collaboration with the National Technical University of Athens (NTUA) participated in the **Baseline project**, with aim the data collection and calculation of the following KPIs for road safety in Greece.



**KEY
PERFORMANCE
INDICATOR**



Data Collection

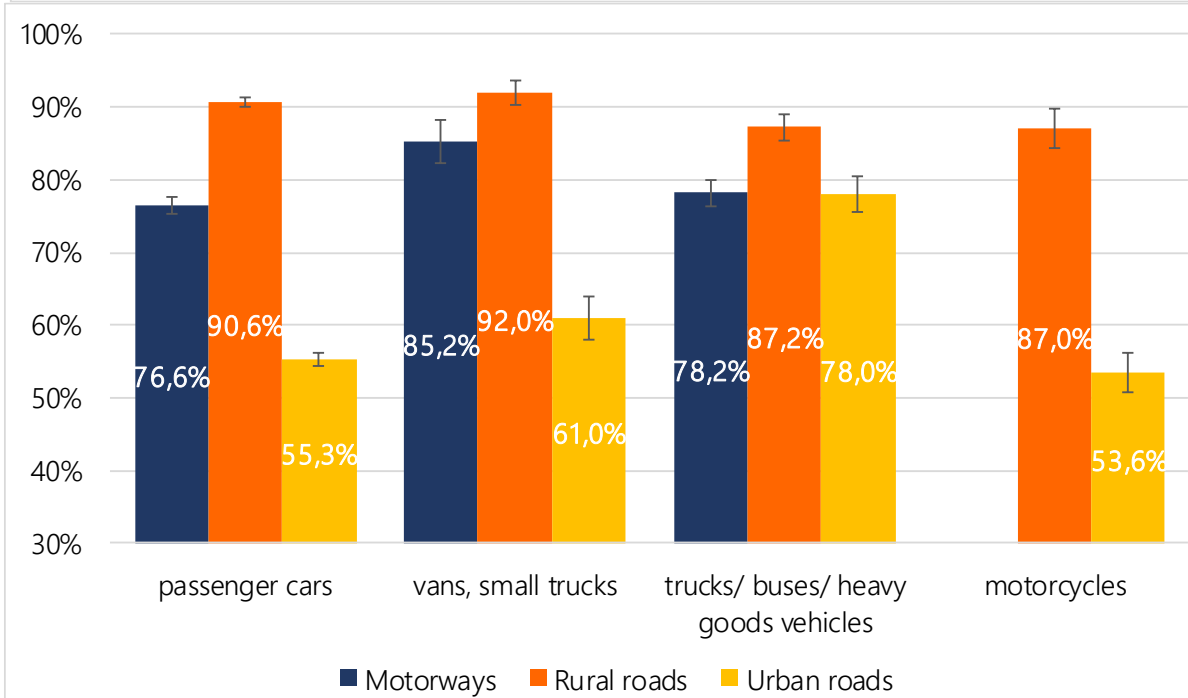
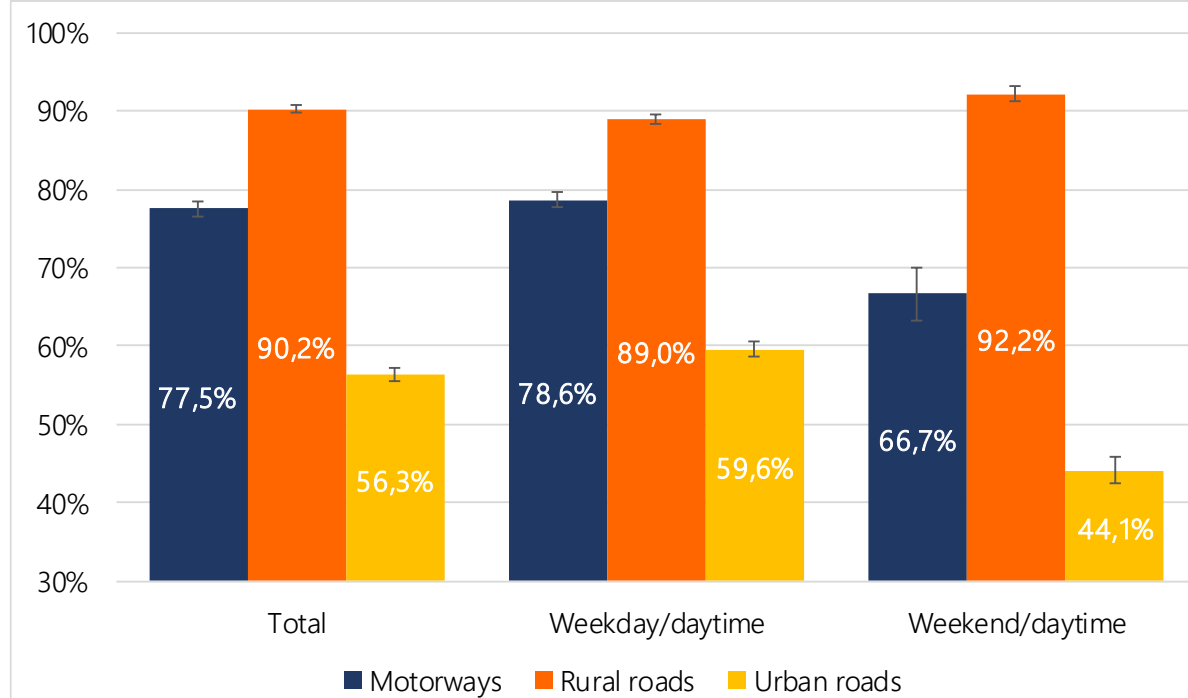
- **Roadside surveys** were carried out in Spring 2022 in order to collect data for the four following road safety KPIs:
 - KPI Speed
 - KPI Seat belt
 - KPI Helmet
 - KPI Driver Distraction
- The roadside surveys were carried out in appropriately selected locations in **15 regions** of Greece.
- **150 locations in total**; 10 locations per road type (urban roads, rural roads and motorways) and region.
- All roadside surveys were carried out **during daytime**, on weekdays and at weekends.
- Data from **national databases** were collected for the KPIs on Vehicle Safety and Post-crash Care.



KPI Speed

- Speed data were collected for **34.420 vehicles**:
 - urban roads: 13.358; rural roads: 13.252; motorways: 7.810
 - weekdays: 27.251; weekends: 7.169
 - passenger cars: 25.344; vans/small trucks: 2.655; trucks/ buses/ heavy goods vehicles: 4.412; motorcycles: 2.009

- The lowest percentages of vehicles moving within the speed limits were observed on **urban roads** (56%), while the highest percentages on **rural roads** (90%).
- Among the different vehicle types, **passenger cars** and **motorcycles inside urban areas** present the lowest KPI values.



KPI Seat belt use

- Data for 28.042 passenger cars were collected
 - 35.041 front occupants and 1.759 rear passengers
 - Motorways: 6.855; rural roads: 9.489; urban roads: 11.688
 - Weekdays: 21.649; weekend: 6.393
- Seat belt use rates for passenger car **drivers and all front occupants** (drivers and front passengers) are similar.
- For the **rear passengers**, the seat-belt use rate is significantly lower (53,9%).
- For all types of vehicle occupants, seat belt use rates are higher on **motorways** and during the **weekend**.

Road Type	Driver	Front Occupant	Rear Passenger
Motorways	83,5% (82,6%-84,4%)	85,3% (84,6%-86,1%)	65,5% (60,8%-70,2%)
Rural Roads	66,6% (65,7%-67,6%)	67,4% (66,5%-68,2%)	54,3% (50,3%-58,2%)
Urban Roads	70,0% (69,2%-70,9%)	71,3% (70,5%-72,0%)	52,7% (49,1%-56,2%)
Total	68,5% (68,0% -69,1%)	69,5% (69%-70,0%)	53,9% (51,6%-56,2%)

Time Period	Driver	Front Occupant	Rear Passenger
Weekdays	67,5% (66,8%-68,1%)	68,4% (67,8%-68,9%)	50,5% (47,8%-53,2%)
Weekend	71,1% (70,0%-72,2%)	72,3% (71,3%-73,2%)	61,9% (57,2%-66,5%)
Total	68,5% (68,0%-69,1%)	69,5% (69%-70,0%)	53,9% (51,6%-56,2%)



KPI Protective systems (Helmet)

- Data for **3.717** motorcycles were collected:
 - 3.186 Riders; 531 Passengers
 - urban roads: 2.387, rural roads: 614, motorways: 185
 - weekdays: 2.474, weekends: 712
- **80,1% of motorcycle riders** wear a helmet, while the respective percentage for the motorcycle passengers is lower (63,5%).
- The highest rates of helmet use for both riders and passengers were observed on **motorways**

Road Type	Rider	Passenger
Motorways	95,1% (91,9%-98,2%)	92,3%
Rural Roads	81,5% (78,4%-84,6%)	61,8% (52,7%-70,9%)
Urban Roads	77,0% (75,3%-78,7%)	63,9% (59,2%-68,7%)
Total	80,1% (78,7%-81,5%)	63,5% (59,4%-67,6%)

Time Period	Rider	Passenger
Weekdays	82,4% (80,9%-83,9%)	70,4% (66,0%-74,8%)
Weekend	75,5% (72,4%-78,7%)	49,9% (40,8%-59,1%)
Total	80,1% (78,7%-81,5%)	63,5% (59,4%-67,6%)



KPI Distraction

- The KPI concerns passenger cars, light goods vehicles/vans and buses.
- Data for **36.858 drivers** were collected.
 - urban roads: 14.526; rural roads: 11.906; motorways: 10.426
 - weekdays: 29.148, weekends: 7.710
 - passenger cars: 28.042; vans/small trucks: 3.186; light goods vehicles: 4.681; buses/coaches: 949
- **92,3%** of drivers are not using a mobile phone while driving, with the highest KPI value percentage being observed for bus drivers.
- As for car drivers, the highest use of mobile phone while driving is observed on **urban roads**.

Road Type	KPI
Motorways	92,0% (91,5%-92,5%)
Rural Roads	93,6% (93,1%-94,0%)
Urban Roads	90,6% (90,1%-91,1%)
Total	92,3% (92,0%-92,6%)

Time Period	KPI
Weekdays	91,5% (91,1%-91,8%)
Weekend	92,4% (93,9%-94,9%)
Total	92,3% (92,0%-92,6%)

Vehicle Type	KPI
passenger car	92,0% (91,7%-92,4%)
light goods vehicle	90,5% (89,6%-91,3%)
bus/coach	98,0% (97,1%-98,9%)
vans, small trucks	94,8% (94,0%-95,5%)
Total	92,3% (92,0%-92,6%)



KPI Vehicle

- Greece in 2020 had a passenger car fleet with an **average age of 17,4 years**.
- Of the 76.988 new cars registered this year, **89,2% are rated with 4 Euro NCAP stars or above**.
- **67,5%** of newly registered passenger cars them are rated with **5 Euro NCAP stars**.
- About **5%** of vehicles are inspected with **major or dangerous deficiency** in technical inspections.

	New Passenger Cars	
	2019	2020
KPI percentage-threshold of 4 stars (excl. no star rating cars)	90,3%	92,4%
KPI percentage-threshold of 4 stars	88,4%	89,2%
KPI percentage-threshold of 5 stars (excl. no star rating cars)	61,3%	69,9%
KPI percentage-threshold of 5 stars	60,0%	67,5%

	New Passenger Cars	
	2019	2020
Average age of the vehicle fleet	16,8	17,4
% of vehicles inspected with any major or dangerous deficiency in technical inspections	5,1%	4,5%



KPI Post-crash Care

- The national EMS database covers only **17 Regional Units** out of 74 in total, representing thus 54% of the total population. No other data are available in Greece.
- Available data for **23.408** calls in 2019 and **18.861** calls in 2020
- For about **8%** of the interventions, the response times were **unknown/ erroneous**
- The response time of the emergency services is on **average 20 minutes** after the call following a road crash, while the **95th percentile is 64 minutes**.

Response Time (min)	2019	2020
KPI - 95 th Percentile	71	64
75 th Percentile	35	32
50 th Percentile	21	20



Conclusions

- Within the Baseline project, Greece collected data for 7 KPIs for first time, which are also comparable with those of the other EU countries.
- The detailed results for the Key Performance Indicators consist valuable information for documenting targeted road safety actions and monitoring road safety progress over this decade.
- Further analysis of these results, alongside with the related exposure and road crash data could reveal the real dimension and main causes of the road safety problem in Greece.



Key

Performance

Indicator



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